

Attorney Docket: 026304-0213 (3KG35391)

What is claimed is:

1. An electronic apparatus, comprising:

a main body;

5 a speaker unit detachably connected to said main body, said speaker unit having a speaker, a first wireless communication unit, and a D/A converter;

a second wireless communication unit which transmits an audio digital signal to the first wireless communication unit over a wireless channel;

10 a detector which detects whether or not said speaker unit is installed in said main body; and

a controller which actuates said second wireless communication unit to transmit the audio digital signal to the first wireless communication unit when said  
15 detector detects that said speaker unit is not installed in said main body,

wherein the D/A converter converts the audio digital signal received by the first communication unit to an audio analog signal, and the speaker outputs  
20 sound on the basis of the audio analog signal.

2. An electronic apparatus according to claim 1, wherein said main body includes a connector to be electrically connected to said speaker unit, and

25 said controller operative for transmitting said audio digital signal to the D/A converter in said

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speaker unit by way of said connector when said speaker is connected to said main body by said connector.

3. An electronic apparatus according to claim 1,  
5 wherein said speaker unit includes:

a second detector which detects whether or not said speaker is installed in said main body;

a battery; and

a power supply controller which supplies electric  
10 power from said battery to the first wireless communication unit when said second detector does not detect that said speaker unit is installed in said main body.

15 4. An electronic apparatus according to claim 3, wherein said power supply controller stops supplying electric power to the first wireless communication unit when said second detector detects that said speaker is installed in said main body.

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5. An electronic apparatus according to claim 3, wherein said power supply controller charges said battery by the electric power supplied from said main body when said second detector detects that said  
25 speaker unit is installed in said main body.

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6. An electronic apparatus according to claim 3,  
wherein said speaker unit includes:

a status detector which detects the remaining  
power of said battery; and

5 a status notification unit which provides a  
notification of the remaining power of said battery  
detected by said status detector.

7. An electronic apparatus according to claim 1,  
10 wherein said speaker unit includes:

a status detector which detects the communication  
status of wireless communications of the first wireless  
communication unit; and

a status notification unit which provides a  
15 notification of the communication status detected by  
said status detector.

8. An electronic apparatus according to claim 1,  
wherein said main body includes:

20 a power supply controller which supplies electric  
power to said speaker unit when said main unit receives  
power from an outside power source, and which does not  
supply electric power to said speaker unit when said  
main unit does not receive power from the outside power  
25 source.

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9. An electronic apparatus in which a speaker unit is detachably mounted, comprising:

a main body in which the speaker unit is detachably mounted;

5 a connector arranged in said main body and which electrically connects with said speaker unit when said speaker unit is mounted in said main body:

a wireless communication unit; and

10 a communication controller which transmits an audio digital signal through one of said connector and said wireless communication unit.

10 An electronic apparatus according to claim 9, further comprising:

15 a detector which detects that the speaker unit is mounted in said main body; and

said communication controller operable for transmitting the audio digital signal through said connector when said detector detects that the speaker  
20 is mounted in said main body, and for transmitting the audio digital signal through said wireless communication unit when said detector does not detect that the speaker unit is mounted in said main body.

25 11. A speaker unit, comprising:

a wireless communication unit which receives an

audio digital signal over a wireless connection;  
a connector which receives the audio digital  
signal over a wired connection;  
a D/A converter coupled to said wireless  
5 communication unit and said connector; and  
a speaker coupled to said D/A converter.

12. A method for outputting an audio digital  
signal from an electronic device to a speaker unit  
10 detachably installed in the electronic device, the  
electronic device and the speaker unit operative for  
wireless communication with each other over wireless  
connection, comprising:

detecting whether or not the speaker unit is  
15 installed in the electronic device, and  
transmitting an audio digital signal to the  
speaker unit through the wireless connection when it is  
detected that the speaker unit is not installed in the  
electronic device.

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13. A method for outputting an audio digital  
signal according to claim 12, further comprising

transmitting an audio digital signal to the  
speaker unit by way of a connector electrically  
25 connected to the speaker unit when it is detected that  
the speaker unit is installed in the main body.

14. A method for outputting an audio digital  
signal according to claim 12, further comprising

supplying electric power for the wireless  
5 communication from a battery of the speaker unit when  
it is detected that the speaker unit is not installed  
in the electronic device.

15. A method for outputting an audio digital  
10 signal according to claim 14, further comprising  
stopping the supply of electric power supply for  
the wireless communication from the battery when it is  
detected that the speaker unit is installed in the  
electronic device.

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16. A method for outputting an audio digital  
signal according to claim 14, further comprising:

determining whether or not said electronic device  
receives electric power from a battery within said  
20 electric device and an outside power source connected  
to said electronic device; and

charging the battery with the electric power  
supplied from the electronic device when it is detected  
that the speaker unit is installed in the electronic  
25 device and the electronic device receives the  
electronic power from the outside power source.

17. A method for outputting an audio digital  
signal according to claim 12, further comprising  
detecting the communication status of the wireless  
5 communications in the speaker unit, and  
providing an indication of the detected  
communication status.

18. A method for outputting an audio digital  
10 signal according to claim 12, further comprising  
detecting in the electronic device that electric  
power is supplied from a commercial power source to  
said electronic device, and

supplying electric power to the speaker unit the  
15 electronic device when the electric power is supplied  
from the commercial power source to the electronic  
device and it is detected that the speaker unit is  
installed in the electronic device.

20 19. A method for outputting an audio digital  
signal according to claim 18, further comprising  
stopping supplying the electric power to the  
speaker unit when the electric power is not supplied  
from the commercial power source even though it is  
25 detected that the speaker unit is installed in the  
electronic device.

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20. A method as recited in claim 19 further  
comprising supplying electric power to operate said  
speaker unit from a battery installed in said speaker  
unit.

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